TEJUS CONSULTANTS

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE MIX

Name of Work	:	1. Improvements to Roads and Drains From Hegdenagar petrol bunk to MCECHS park in Ward No. 06 2. Improvements to Roads and Drains in Hegdenagar and Surrounding areas in Ward No. 06 3. Improvements to Roads and Drains in Munivenkatappa Layout Nagawara in Ward No. 06 4. Drilling of Borewells and Maintance in Ward No.06
Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	:	HONNAPPA MURTHY
Date of Testing	:	16-09-19
Type of Mix	:	BC
Sample I/D	:	BC1

DETERMINATION OF BITUMEN CONTENT

Description	Trail 1	Trail 2
1. Weight of Mixture before extraction, g	930	910
2. Weight of Mixture after extraction, g	878	859
3. Weight of Bitumen	52	51
4. Weight of filter paper before extraction, g	2.00	2.15
5. Weight of filter paper after extraction, g	4.10	4.00
6. Weight of fines, g	2.10	1.85
7. Weight of Bitumen & fines	54.10	52.85
8. Bitumen content in %	5.82	5.81
9. Average Bitumen content in %	**5.81**	
10. Minimum Bitumen content in %	**5.80**	

GRADATION FOR BC AFTER EXTRACTION

(As per MORT&H 500-18,Grading-2)

Sample Location:	At site	Date of Sampling:		
		Date of testing:		
Type of material & Purpose:	BC	Oven Dry Wt.(gms):	878.0	

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
19.00	0	0	0.00	100.00	100.00
13.20	89	89.0	10.14	89.86	79 - 100
9.50	130	208.0	23.69	76.31	71 - 95
4.75	91	293.0	33.37	66.63	53 - 71
2.360	138	435.0	49.54	50.46	42 - 58
1.180	122	532.0	60.59	39.41	34 - 48
0.600	75	607.0	69.13	30.87	26 - 38
0.300	61	668.0	76.08	23.92	18 - 28
0.150	55	723.0	82.35	17.65	12 - 20
0.075	95	818.0	93.17	6.83	4 - 10
Pan	60.0	878.0			
Total	878.0				

Consultant's Representative

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

TEJUS
CONSULTANTS

Name of Work	:	1. Improvements to Roads and Drains From Hegdenagar petrol bunk to MCECHS park in Ward No. 06 2. Improvements to Roads and Drains in Hegdenagar and Surrounding areas in Ward No. 06 3. Improvements to Roads and Drains in Munivenkatappa Layout Nagawara in Ward No. 06 4. Drilling of Borewells and Maintance in Ward No.06
Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	:	HONNAPPA MURTHY
Date of Testing	:	16-09-19
Type of Mix	:	Tack coat
Sample I/D	:	1

DETERMINATION OF RATE OF SPREAD TACK COAT

Determination	**Unit**	**Test No**	
		1	**2**
Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
Area of Plate (a)	Sq.mtr	0.09	0.09
Initial Wt of empty Plate (b)	Kg	0.822	0.841
Final weight of plate after application of tack Coat (c)	Kg	0.845	0.864
Weight of tack Coat (d=c-b)	Kg	0.023	0.023
Rate of spread of tack coat	Kg/sq.m	0.256	0.256
Average	Kg/sq.m	0.256	
Specified Limit	Kg/sq.m	**0.250 Kg/sq.m**	

Consultant's Representative

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

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Project	1. Improvements to Roads and Drains From Hegdenagar petrol bunk to MCECHS park in Ward No. 06 2. Improvements to Roads and Drains in Hegdenagar and Surrounding areas in Ward No. 06 3. Improvements to Roads and Drains in Munivenkatappa Layout Nagawara in Ward No. 06 4. Drilling of Borewells and Maintance in Ward No.06
Client	Bruhat Bengaluru Mahanagara Palike
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	HONNAPPA MURTHY

AGGREGATE IMPACT VALUE (IS: 2386 Part - 4)

Proposed Use	BC	**Date of Sampling**	**17-09-19**
Sample Location	At plant	**Date of Testing**	**17-09-19**

Sl. No.	Description		Test No. 1	Test No. 2	Test No. 3	Spec Limit (%)
1	Wt. of stone pieces (dry) passing IS Sieve 12.5mm but retained in IS sieve 10mm (gm)	(Wa)	363.00	362.00	385.00	
2	Wt. of the fraction retained in IS sieve 2.36mm after the impact test (gm)	(Wb)	278.00	268.00	290.00	
3	Wt. of the fraction passed in IS sieve 2.36mm after the impact test (gm)	(Wc)	85.00	94.00	95.00	
4	Aggregate Impact Value (%)	(Wc/Wa)*100	23.42	25.97	24.68	
5	Average Aggregate impact value	(%)	24.69			Max - 30 %

Remarks : Satisfactory / Not Satisfactory

Consultant's Representative

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

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Project	1. Improvements to Roads and Drains From Hegdenagar petrol bunk to MCECHS park in Ward No. 06 2. Improvements to Roads and Drains in Hegdenagar and Surrounding areas in Ward No. 06 3. Improvements to Roads and Drains in Munivenkatappa Layout Nagawara in Ward No. 06 4. Drilling of Borewells and Maintance in Ward No.06
Client	Bruhat Bengaluru Mahanagara Palike
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	HONNAPPA MURTHY

FLAKINESS AND ELONGATION INDICES (IS 2386, PART 1)

Type of Material	BC		**Proposed Use**	**BC**
Sample Location	At plant		**Date of Sampling**	17-09-19
			Date of Testing	17-09-19

Size of aggregate		**Flakiness Index**		**Elongation Index**	
Passing through IS sieve, mm	**Retained on IS sieve, mm**	**Total wt. of aggregate retained on sieves (A) gms.**	**Wt. of aggregate passing from Flakiness gauge (B) gms**	**Wt. of aggregate retained on Flakiness gauge (C) gms**	**Wt. of aggregate retained on Elongation gauge after retained on Flakiness gauge(D)gms**
63.0	50.0	0	0	0	0
50.0	40.0	0	0	0	0
40.0	31.5	0	0	0	0
31.5	25.0	0	0	0	0
25.0	20.0	0	0	0	0
20.0	16.0	950	85	940	65
16.0	12.5	1310	120	1250	120
12.5	10.0	510	75	440	60
10.0	6.3	495	55	430	65
Total		**3265**	**335**	**3060**	**310**

Note: Minimum 200 Pcs should be taken on each fraction of test

Flakiness Index(%):	10.26
Elongation Index(%):	10.13
Combined FI+EL (%)	20.39

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Name of Work	:	1. Improvements to Roads and Drains From Hegdenagar petrol bunk to MCECHS park in Ward No. 06 2. Improvements to Roads and Drains in Hegdenagar and Surrounding areas in Ward No. 06 3. Improvements to Roads and Drains in Munivenkatappa Layout Nagawara in Ward No. 06 4. Drilling of Borewells and Maintance in Ward No.06
Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	:	HONNAPPA MURTHY
Date of Testing	:	17-09-19
Type of Mix	:	BC
Sample I/D	:	BC2

GRADATION FOR BC
(As per MORT&H 500-18,Grading-2)

Sample Location:	At plant	Date of Sampling:	17-09-19
		Date of testing:	17-09-19
Type of material & Purpose:	BC	Oven Dry Wt.(gms):	1200.0

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
19	0	0	0.00	100.00	100.00
13.20	89	90.0	7.50	92.50	79 - 100
9.50	122	208.0	17.33	82.67	71 - 95
4.75	230	440.0	36.67	63.33	53 - 71
2.360	185	625.0	52.08	47.92	42 - 58
1.180	100	725.0	60.42	39.58	34 - 48
0.600	112	837.0	69.75	30.25	26 - 38
0.300	90	927.0	77.25	22.75	18 - 28
0.150	65	980.0	81.67	18.33	12 - 20
0.075	115	1095.0	91.25	8.75	4 - 10
Pan	105.0	1200.0			
Total	1200.0				

Consultant's Representative

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

TEJUS CONSULTANTS

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE MIX

Name of Work	:	1. Improvements to Roads and Drains From Hegdenagar petrol bunk to MCECHS park in Ward No. 06 2. Improvements to Roads and Drains in Hegdenagar and Surrounding areas in Ward No. 06 3. Improvements to Roads and Drains in Munivenkatappa Layout Nagawara in Ward No. 06 4. Drilling of Borewells and Maintance in Ward No.06
Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	:	HONNAPPA MURTHY
Date of Testing	:	17-09-19
Type of Mix	:	BC
Sample I/D	:	BC2

DETERMINATION OF BITUMEN CONTENT

Description	Trail 1	Trail 2
1. Weight of Mixture before extraction, g	935	915
2. Weight of Mixture after extraction, g	883	863
3. Weight of Bitumen	52	52
4. Weight of filter paper before extraction, g	2.00	2.15
5. Weight of filter paper after extraction, g	4.10	4.00
6. Weight of fines, g	2.10	1.85
7. Weight of Bitumen & fines	54.10	53.85
8. Bitumen content in %	5.79	5.89
9. Average Bitumen content in %	**5.84**	
10. Minimum Bitumen content in %	**5.80**	

GRADATION FOR BC AFTER EXTRACTION

(As per MORT&H 500-18,Grading-2)

Sample Location:	At site	Date of Sampling:	
		Date of testing:	
Type of material & Purpose:	BC	Oven Dry Wt.(gms):	883.0

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
19.00	0	0	0.00	100.00	100.00
13.20	88	88.0	9.97	90.03	79 - 100
9.50	122	210.0	23.78	76.22	71 - 95
4.75	88	298.0	33.75	66.25	53 - 71
2.360	142	440.0	49.83	50.17	42 - 58
1.180	125	565.0	63.99	36.01	34 - 48
0.600	80	645.0	73.05	26.95	26 - 38
0.300	68	713.0	80.75	19.25	18 - 28
0.150	45	758.0	85.84	14.16	12 - 20
0.075	70	828.0	93.77	6.23	4 - 10
Pan	55	883.0			
Total	883				

Consultant's Representative

Project Division
Yelahanka Zone
Bangalore

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Name of Work	:	1. Improvements to Roads and Drains From Hegdenagar petrol bunk to MCECHS park in Ward No. 06 2. Improvements to Roads and Drains in Hegdenagar and Surrounding areas in Ward No. 06 3. Improvements to Roads and Drains in Munivenkatappa Layout Nagawara in Ward No. 06 4. Drilling of Borewells and Maintance in Ward No.06
Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	:	HONNAPPA MURTHY
Date of Testing	:	17-09-19
Type of Mix	:	Tack coat
Sample I/D	:	2

DETERMINATION OF RATE OF SPREAD TACK COAT

Determination	Unit	Test No	
		1	2
Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
Area of Plate (a)	Sq.mtr	0.09	0.09
Initial Wt of empty Plate (b)	Kg	0.796	0.784
Final weight of plate after application of tack Coat (c)	Kg	0.819	0.807
Weight of tack Coat (d=c-b)	Kg	0.023	0.023
Rate of spread of tack coat	Kg/sq.m	0.256	0.256
Average	Kg/sq.m	0.256	
Specified Limit	Kg/sq.m	**0.250 Kg/sq.m**	

Consultant's Representative

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

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Project	1. Improvements to Roads and Drains From Hegdenagar petrol bunk to MCECHS park in Ward No. 06 2. Improvements to Roads and Drains in Hegdenagar and Surrounding areas in Ward No. 06 3. Improvements to Roads and Drains in Munivenkatappa Layout Nagawara in Ward No. 06 4. Drilling of Borewells and Maintance in Ward No.06
Client	Bruhat Bengaluru Mahanagara Palike
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	HONNAPPA MURTHY

AGGREGATE IMPACT VALUE (IS: 2386 Part - 4)

Proposed Use	BC	**Date of Sampling**	**19-09-19**
Sample Location	At plant	**Date of Testing**	**19-09-19**

Sl. No.	Description		Test No. 1	Test No. 2	Test No. 3	Spec Limit (%)
1	Wt. of stone pieces (dry) passing IS Sieve 12.5mm but retained in IS sieve 10mm (gm)	(Wa)	350.00	340.00	390.00	
2	Wt. of the fraction retained in IS sieve 2.36mm after the impact test (gm)	(Wb)	270.00	250.00	300.00	
3	Wt. of the fraction passed in IS sieve 2.36mm after the impact test (gm)	(Wc)	80.00	90.00	90.00	
4	Aggregate Impact Value (%)	(Wc/Wa)*100	22.86	26.47	23.08	
5	Average Aggregate impact value	(%)	24.13			Max - 30 %

Remarks : ✓ Satisfactory / Not Satisfactory

Consultant's Representative

TEJUS CONSULTANTS

Asst. Executive Engineer
Project Division
Yelahanka Zone
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Project	1. Improvements to Roads and Drains From Hegdenagar petrol bunk to MCECHS park in Ward No. 06 2. Improvements to Roads and Drains in Hegdenagar and Surrounding areas in Ward No. 06 3. Improvements to Roads and Drains in Munivenkatappa Layout Nagawara in Ward No. 06 4. Drilling of Borewells and Maintance in Ward No.06
Client	Bruhat Bengaluru Mahanagara Palike
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	HONNAPPA MURTHY

FLAKINESS AND ELONGATION INDICES (IS 2386, PART 1)

Type of Material	BC		**Proposed Use**	**BC**
Sample Location	At plant		**Date of Sampling**	19-09-19
			Date of Testing	19-09-19

Size of aggregate		**Flakiness Index**		**Elongation Index**	
Passing through IS sieve, mm	**Retained on IS sieve, mm**	**Total wt. of aggregate retained on sieves (A) gms.**	**Wt. of aggregate passing from Flakiness gauge (B) gms**	**Wt. of aggregate retained on Flakiness gauge (C) gms**	**Wt. of aggregate retained on Elongation gauge after retained on Flakiness gauge(D)gms**
63.0	50.0	0	0	0	0
50.0	40.0	0	0	0	0
40.0	31.5	0	0	0	0
31.5	25.0	0	0	0	0
25.0	20.0	0	0	0	0
20.0	16.0	960	82	950	68
16.0	12.5	1310	115	1250	120
12.5	10.0	525	72	442	52
10.0	6.3	500	62	433	72
Total		**3295**	**331**	**3075**	**312**

Note: Minimum 200 Pcs should be taken on each fraction of test

		Flakiness Index(%):	10.05		
		Elongation Index(%):	10.15		
		Combined FI+EL (%)	20.19		

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Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

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Name of Work	:	1. Improvements to Roads and Drains From Hegdenagar petrol bunk to MCECHS park in Ward No. 06 2. Improvements to Roads and Drains in Hegdenagar and Surrounding areas in Ward No. 06 3. Improvements to Roads and Drains in Munivenkatappa Layout Nagawara in Ward No. 06 4. Drilling of Borewells and Maintance in Ward No.06
Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	:	HONNAPPA MURTHY
Date of Testing	:	19-09-19
Type of Mix	:	BC
Sample I/D	:	BC3

GRADATION FOR BC
(As per MORT&H 500-18,Grading-2)

Sample Location:	At plant		Date of Sampling:	19-09-19
			Date of testing:	19-09-19
Type of material & Purpose:	BC		Oven Dry Wt.(gms):	1200.0

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
19	0	0	0.00	100.00	100.00
13.20	95	98.0	8.17	91.83	79 - 100
9.50	120	200.0	16.67	83.33	71 - 95
4.75	235	445.0	37.08	62.92	53 - 71
2.360	180	620.0	51.67	48.33	42 - 58
1.180	98	718.0	59.83	40.17	34 - 48
0.600	110	828.0	69.00	31.00	26 - 38
0.300	85	915.0	76.25	23.75	18 - 28
0.150	60	1010.0	84.17	15.83	12 - 20
0.075	110	1120.0	93.33	6.67	4 - 10
Pan	80.0	1200.0			
Total	1200.0				

Consultant's Representative

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

TEJUS CONSULTANTS

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE MIX

Name of Work	:	1. Improvements to Roads and Drains From Hegdenagar petrol bunk to MCECHS park in Ward No. 06 2. Improvements to Roads and Drains in Hegdenagar and Surrounding areas in Ward No. 06 3. Improvements to Roads and Drains in Munivenkatappa Layout Nagawara in Ward No. 06 4. Drilling of Borewells and Maintance in Ward No.06
Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	:	HONNAPPA MURTHY
Date of Testing	:	19-09-19
Type of Mix	:	BC
Sample I/D	:	BC3

DETERMINATION OF BITUMEN CONTENT

Description	Trail 1	Trail 2
1. Weight of Mixture before extraction, g	932	911
2. Weight of Mixture after extraction, g	880	860
3. Weight of Bitumen	52	51
4. Weight of filter paper before extraction, g	2.00	2.15
5. Weight of filter paper after extraction, g	4.10	4.00
6. Weight of fines, g	2.10	1.85
7. Weight of Bitumen & fines	54.10	52.85
8. Bitumen content in %	5.80	5.80
9. Average Bitumen content in %	**5.80**	
10. Minimum Bitumen content in %	**5.80**	

GRADATION FOR BC AFTER EXTRACTION

(As per MORT&H 500-18,Grading-2)

Sample Location:	At site	Date of Sampling:	4/19/2019
		Date of testing:	4/19/2019
Type of material & Purpose:	BC	Oven Dry Wt.(gms):	880.0

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
19.00	0	0	0.00	100.00	100.00
13.20	90	90.0	10.23	89.77	79 - 100
9.50	120	210.0	23.86	76.14	71 - 95
4.75	86	296.0	33.64	66.36	53 - 71
2.360	154	450.0	51.14	48.86	42 - 58
1.180	100	550.0	62.50	37.50	34 - 48
0.600	80	630.0	71.59	28.41	26 - 38
0.300	66	696.0	79.09	20.91	18 - 28
0.150	42	738.0	83.86	16.14	12 - 20
0.075	69	807.0	91.70	8.30	4 - 10
Pan	73.0	880.0			
Total	880.0				

Consultant's Representative

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

TEJUS
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Name of Work	:	1. Improvements to Roads and Drains From Hegdenagar petrol bunk to MCECHS park in Ward No. 06 2. Improvements to Roads and Drains in Hegdenagar and Surrounding areas in Ward No. 06 3. Improvements to Roads and Drains in Munivenkatappa Layout Nagawara in Ward No. 06 4. Drilling of Borewells and Maintance in Ward No.06
Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	:	HONNAPPA MURTHY
Date of Testing	:	19-09-19
Type of Mix	:	Tack coat
Sample I/D	:	3

DETERMINATION OF RATE OF SPREAD TACK COAT

Determination	**Unit**	**Test No**	
		1	**2**
Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
Area of Plate (a)	Sq.mtr	0.090	0.090
Initial Wt of empty Plate (b)	Kg	0.750	0.753
Final weight of plate after application of tack Coat (c)	Kg	0.773	0.776
Weight of tack Coat (d=c-b)	Kg	0.023	0.023
Rate of spread of tack coat	Kg/sq.m	0.256	0.256
Average	Kg/sq.m	0.256	
Specified Limit	Kg/sq.m	**0.250 to 0.30 Kg/sq.m**	

Consultant's Representative

TEJUS CONSULTANTS

Asst. Executive Engineer
Project Division
Vishwanka Zone
Bangalore

TEJUS
CONSULTANTS

Project	1. Improvements to Roads and Drains From Hegdenagar petrol bunk to MCECHS park in Ward No. 06 2. Improvements to Roads and Drains in Hegdenagar and Surrounding areas in Ward No. 06 3. Improvements to Roads and Drains in Munivenkatappa Layout Nagawara in Ward No. 06 4. Drilling of Borewells and Maintance in Ward No.06
Client	Bruhat Bengaluru Mahanagara Palike
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	HONNAPPA MURTHY

AGGREGATE IMPACT VALUE (IS: 2386 Part - 4)

Proposed Use	BC	**Date of Sampling**	**23-09-19**
Sample Location	At plant	**Date of Testing**	**23-09-19**

Sl. No.	Description		Test No. 1	Test No. 2	Test No. 3	Spec Limit (%)
1	Wt. of stone pieces (dry) passing IS Sieve 12.5mm but retained in IS sieve 10mm (gm)	(Wa)	353.00	345.00	395.00	
2	Wt. of the fraction retained in IS sieve 2.36mm after the impact test (gm)	(Wb)	273.00	255.00	305.00	
3	Wt. of the fraction passed in IS sieve 2.36mm after the impact test (gm)	(Wc)	80.00	90.00	90.00	
4	Aggregate Impact Value (%)	(Wc/Wa)*100	22.66	26.09	22.78	
5	Average Aggregate impact value	(%)	23.84			Max - 30 %

Remarks : Satisfactory / Not Satisfactory

Consultant's Representative

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

TEJUS
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Project	1. Improvements to Roads and Drains From Hegdenagar petrol bunk to MCECHS park in Ward No. 06 2. Improvements to Roads and Drains in Hegdenagar and Surrounding areas in Ward No. 06 3. Improvements to Roads and Drains in Munivenkatappa Layout Nagawara in Ward No. 06 4. Drilling of Borewells and Maintance in Ward No.06
Client	Bruhat Bengaluru Mahanagara Palike
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	HONNAPPA MURTHY

FLAKINESS AND ELONGATION INDICES (IS 2386, PART 1)

Type of Material	BC		**Proposed Use**	**BC**
Sample Location	At plant		**Date of Sampling**	23-09-19
			Date of Testing	23-09-19

Size of aggregate		**Flakiness Index**		**Elongation Index**	
Passing through IS sieve, mm	**Retained on IS sieve, mm**	**Total wt. of aggregate retained on sieves (A) gms.**	**Wt. of aggregate passing from Flakiness gauge (B) gms**	**Wt. of aggregate retained on Flakiness gauge (C) gms**	**Wt. of aggregate retained on Elongation gauge after retained on Flakiness gauge(D)gms**
63.0	50.0	0	0	0	0
50.0	40.0	0	0	0	0
40.0	31.5	0	0	0	0
31.5	25.0	0	0	0	0
25.0	20.0	0	0	0	0
20.0	16.0	955	84	945	70
16.0	12.5	1320	120	1251	125
12.5	10.0	530	75	445	53
10.0	6.3	480	64	435	74
Total		**3285**	**343**	**3076**	**322**

Note: Minimum 200 Pcs should be taken on each fraction of test

		Flakiness Index(%):	10.44		
		Elongation Index(%):	10.47		
		Combined FI+EL (%)	20.91		

TEJUS CONSULTANTS

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

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Name of Work	:	1. Improvements to Roads and Drains From Hegdenagar petrol bunk to MCECHS park in Ward No. 06 2. Improvements to Roads and Drains in Hegdenagar and Surrounding areas in Ward No. 06 3. Improvements to Roads and Drains in Munivenkatappa Layout Nagawara in Ward No. 06 4. Drilling of Borewells and Maintance in Ward No.06
Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	:	HONNAPPA MURTHY
Date of Testing	:	23-09-19
Type of Mix	:	BC
Sample I/D	:	BC4

GRADATION FOR BC
(As per MORT&H 500-18,Grading-2)

Sample Location:	At plant		Date of Sampling:	23-09-19
			Date of testing:	23-09-19
Type of material & Purpose:	BC		Oven Dry Wt.(gms):	1200.0

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
19	0	0	0.00	100.00	100.00
13.20	95	87.0	7.25	92.75	79 - 100
9.50	120	207.0	17.25	82.75	71 - 95
4.75	235	421.0	35.08	64.92	53 - 71
2.360	180	615.0	51.25	48.75	42 - 58
1.180	98	731.0	60.92	39.08	34 - 48
0.600	110	841.0	70.08	29.92	26 - 38
0.300	85	926.0	77.17	22.83	18 - 28
0.150	60	980.0	81.67	18.33	12 - 20
0.075	110	1090.0	90.83	9.17	4 - 10
Pan	110.0	1200.0			
Total	1200.0				

Consultant's Representative

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore